

XVIII. *On new Species of Fossorial Hymenoptera from Africa, mostly Elidinae.* By ROWLAND E. TURNER, F.Z.S., F.E.S.

[Read November 6th, 1912.]

DR. BRAUNS has forwarded to me a number of species of *Myzine*, mostly unique specimens, the types of the new species remaining in his collection.

Although a considerable number of males have been described from S. Africa, and some are still undescribed in various collections, very few females have hitherto come to hand. The collection is therefore of great interest, containing several undescribed females. These show much variety both in the length and neuration of the wings, from the fully developed wings of *rufifrons*, Fabr., to the very short wings of *perniciosa*, Turn., in which there is only one cubital cell. For the species with short wings the name *Pseudomeria*, Saund., may be conveniently retained, but should not be treated as of more than sub-generic importance, at all events until the males are known. At present both sexes are known in only two or three of the S. African species of *Myzine*, and it is quite possible that some of the short-winged females may have quite ordinary males, though probably the only known male with strongly reduced neuration, *M. stigma*, Turn., will prove to have a female of the small *Pseudomeria* type.

I also append descriptions of a few species of other families recently received by the British Museum from East Africa.

Family SCOLIIDAE.

Sub-family ELIDINAE.

KEY TO THE SPECIES OF *BRAUNSONERIA*, TURN.

♀ ♀.

Females.

1. Punctures coarse and often confluent longitudinally; abdomen black marked with creamy white; length 12 mm., robust *B. mutilloides*, Turn.

- Smooth or finely and evenly punctured ;
abdomen more or less red, without
white marks ; slender, length about
7 mm. 2.
2. Finely and evenly punctured ; ferru-
ginous, head and abdominal seg-
ments 3-5 black *B. perpunctata*, Turn.
- Almost entirely smooth and shining 3.
3. Head red ; pronotum as broad as long . *B. quadraticeps*, Turn.
Head black ; pronotum longer than
broad *B. atriceps*, Turn.

Braunsomeria perpunctata, sp. n.

♀. Aptera, punctata, ferruginea ; capite fusco-ferrugineo ; seg-
mentis dorsalibus 3-5 nigris.

Long. 7 mm.

♀. Head rectangular, a little broader than long, almost flat ;
mandibles not narrowed to the apex, bidentate at the apex, the
teeth of about equal size, the inner tooth bent abruptly inwards.
Antennae scarcely longer than the head, inserted close together, the
tubercles above the base of the antennae well developed and distinctly
separated. Eyes almost round and rather flat ; ocelli absent, their
position indicated by large punctures. Head, thorax and abdomen
closely and rather finely punctured, most finely on the abdomen.
Pronotum narrower than the head, longer than broad ; tegulae
absent ; scutellum short, broadly rounded at the apex ; median
segment a little shorter and narrower than the pronotum, obliquely
sloped posteriorly. Petiole about as long as the first joint of the
posterior tarsi, first abdominal segment broadly rounded at the base
beyond the petiole ; second and third dorsal segments no longer
than the others and slightly constricted at the base, sixth dorsal
segment smooth and shining at the apex and in the middle, broadly
rounded at the apex. Ventral surface shining, very sparsely and
finely punctured.

Hab. CAPE COLONY, Willowmore (*Dr. Brauns*).

Easily distinguished from *B. quadraticeps* and *atriceps*
by the close and even puncturation.

Braunsomeria mutilloides, sp. n.

♀. Nigra ; thorace segmentoque mediano ferrugineis ; tarsi
testaceis ; mandibulis flagelloque fusco-ferrugineis ; segmento dorsali
secundo maculis tribus magnis apicalibus ; quarto fascia lata

apicali utrinque emarginata, quinto macula apicali utrinque pallide flavis.

Long. 12 mm.

♀. Mandibles broad, not narrowed to the apex, bidentate, the teeth of about equal size, the inner tooth bent abruptly inwards. Clypeus very short, broadly arched; the labrum slightly exposed. Antennae longer than the head, the first joint of the flagellum concealed in the apex of the scape; interantennal prominence well developed, truncate at the apex. Head rectangular, half as broad again as long, very slightly convex, coarsely punctured, the punctures more or less confluent longitudinally; eyes large, oval; ocelli absent. Thorax and median segment coarsely punctured reticulate; tegulae very small; pronotum a little longer than broad; scutellum short, broadly rounded at the apex; median segment as long as the pronotum and a little narrower, obliquely sloped posteriorly, the sides of the segment almost smooth. Abdomen petiolate, the petiole narrow and about as long as the second joint of the posterior tarsi, the basal segment abruptly widened from the petiole and subtruncate anteriorly, more than half as wide at the base as at the apex, closely punctured, the sculpture somewhat concealed by close black pubescence; second and third segments longitudinally punctured striate, not larger than the other segments; fourth and fifth closely punctured; sixth shining and sparsely punctured, smooth in the middle and at the apex, broadly rounded at the apex. Intermediate coxae widely, posterior narrowly separated; legs short; tarsal unguis small, with one tooth near the middle.

Hab. Salisbury, Mashonaland (*G. A. K. Marshall*).

Type in Coll. Brauns.

In general appearance this curious insect resembles some of the *Mutillidae*, the pale markings of the abdomen representing the patches of pale pubescence so common in that family. Although differing much in size and sculpture from other known species of *Braunsomeria*, I do not consider the structural differences sufficient to remove it from that genus.

KEY TO THE ETHIOPIAN SPECIES OF *MYZINE*.

♀ ♀.

Females.

1. Stigma situated before one-fifth from the base of the forewing; second dorsal segment with a broad, white, transverse band. Wings very short *M. newei*, Turn.

- Stigma situated at or beyond one-third from the base of the forewing; second dorsal segment without a white band. Wings sometimes short, usually of normal length 2.
2. Second cubital cell absent 3.
- Second cubital cell present 10.
3. Third cubital cell absent, the neurathion not extending beyond the stigma *M. pernicioso*, Turn.
- Third cubital cell present 4.
4. Entirely black; size 17 mm. or more, very robust 5.
- More or less marked with red or ferruginous, smaller and less robust 6.
5. Forewing scarcely longer than the thorax and median segment combined, mandibles with a tooth bent sharply inwards close to the apex; apical dorsal segment aciculate *M. infradentata*, Turn.
- Forewing as long as the head, thorax and median segment combined; mandibles without a tooth bent inwards; apical dorsal segment smooth *M. klugii*, Westw.
6. Median segment with a median sulcus or carina 7.
- Median segment without a sulcus or carina 9.
7. Head and pronotum red, abdomen black; size about 15 mm.; wings of normal length 8.
- Head and thorax ferruginous, abdomen ferruginous at the base with white lateral spots; size about 10 mm.; wings short . . . *M. perornata*, Turn.
8. Legs red; apical dorsal segment smooth *M. semirufa*, Gerst.
- Legs black; apical dorsal segment punctured-striate *M. rufosplendida*, Turn.
9. Pronotum red *M. sublevis*, Turn.

- Pronotum black *M. limata*, Sm.
10. Black, without any ferruginous
colour 11.
Black, with more or less ferruginous
colour 12.
11. Frontal sulcus almost obsolete;
pubescence on median segment
dark *M. umbratica*, Turn.
Frontal sulcus well defined;
pubescence on median segment
white *M. inconspicua*, Turn.
12. Pronotum red 13.
Pronotum black 14.
13. Head black, mesonotum red; robust. *M. multipicta*, Turn.
Head red, mesonotum black;
slender *M. quadrata*, Turn.
14. Abdomen ferruginous, head black
or ferruginous *M. abdominalis*, Guér.
Abdomen black, sometimes red at
the apex; head more or less
ferruginous 15.
15. Wings fuscous, flushed with blue;
median segment transversely
striated on the posterior slope
and on the sides of the dorsal
surface, smooth only in the
middle *M. rufifrons*, Fabr.
Wings fusco-hyaline; median seg-
ment smooth, shallowly punc-
tured on the posterior slope . *M. rufitarsis*, Cam.

I have not seen *Myzine* (*Meira*!) *immaculatus*, Cam., and the description is not sufficiently good to include the species in the key.

♂ ♂.

Males.

1. Neuration beyond the stigma obsolete, only one cubital cell . . . *M. stigma*, Turn.
Neuration continued beyond the
stigma, three cubital cells . . . 2.
2. Cubital and discoidal nervures of
forewing not continued beyond
the cells 3.
Cubital and discoidal nervures of

- forewing continued beyond the cells, almost reaching the margin. 5.
3. Basal abdominal segment nodose, longer than broad *M. swalei*, Turn.
 Basal abdominal segment not nodose, as broad as long 4.
4. Antennae stout, thickened to the apex; third cubital cell as long as the second on the radius . . . *M. braunsi*, Turn.
 Antennae slender, not thickened to the apex; third cubital cell very short, not more than half as long as the second on the radius . . . *M. diffinis*, Turn.
5. Entirely black *M. klugii*, Westw.
 Abdomen and pronotum more or less banded with yellow 6.
6. The yellow bands on the abdomen emarginate or interrupted on each side 7.
 The yellow bands on the abdomen entire, not emarginate or interrupted laterally 16.
7. Basal abdominal segment at least red 8.
 Basal abdominal segment black 10.
8. Basal abdominal segment only red. *M. rufinodis*, Turn.
 Two basal abdominal segments red. 9.
9. Yellow abdominal bands emarginate laterally; median segment smooth posteriorly *M. rufonigra*, Bingh.
 Yellow abdominal bands interrupted laterally; median segment punctured-rugose throughout . . . *M. consanguinea*, Turn.
10. Posterior margin of the pronotum without a yellow band *M. kristenseni*, Turn.
 Posterior margin of the pronotum with a yellow band 11.
11. Anterior margin of the pronotum without a yellow band; basal abdominal segment globular. . . *M. constrictiventris*, Turn.
 Anterior and posterior margins of the pronotum, both banded with yellow; basal abdominal segment not globular. 12.

12. Second recurrent nervure interstitial with the second transverse cubital nervure *M. basutorum*, Turn.
 Second recurrent nervure received by the third cubital cell 13.
13. Basal abdominal segment tuberculate at the apex beneath; apical abdominal segment red except at the base *M. capicola*, Turn.
 Basal abdominal segment not tuberculate beneath; apical segment black, sometimes marked with yellow 14.
14. Apical segment wholly black; abdominal bands interrupted laterally *M. interrupta*, Cam.
 Apical segment with a yellow spot on each side; abdominal bands emarginate laterally 15.
15. Pronotum shallowly emarginate anteriorly; emargination of the apical dorsal segment broader at the apex than deep *M. abdominalis*, Guér.
 (= *M. continua*, Cam.).
 Anterior margin of pronotum straight; emargination of the apical dorsal segment as deep as the apical breadth *M. rufifrons*, Fabr.
16. The apical processes of the seventh dorsal segment broadly truncate at the apex *M. semirufa*, Gerst.
 The apical processes not truncate 17.
17. Pronotum as long as the mesonotum, distinctly narrowed anteriorly *M. politissima*, Turn.
 Pronotum much shorter than the mesonotum, not distinctly narrowed anteriorly 18.
18. Abdomen very closely and finely punctured, subopaque and strongly pubescent, with slight blue gloss. *M. mernensis*, Cam.
 Abdomen rather sparsely and less finely punctured, without blue gloss *M. impetuus*, Turn.

-- The following males are not described with sufficient accuracy to enable me to identify them.

1. *Myzine haemorrhoidalis*, Guér.

Myzine haemorrhoidalis, Guér., Dict. Pitt. Hist. Nat., V, p. 581 (1837), ♂.

Myzine capensis, Sm., Cat. Hym. B. M., III, p. 74 (1855), ♂.

"Tête, antennes et corselet noirs, ponctués et velus, abdomen plus étroit à la base, noir, à l'extrémité rouge; deux petites stries au premier segment et une bande aux quatres autres jaunes, ailes incolores, pattes fauves.

"Long. 12 mm. Du Cap de Bonne Esperance."

2. *Myzine servillei*, Guér.

Myzine servillei, Guér., Dict. Pitt. Hist. Nat., V, p. 582 (1837), ♂.

"Tête et antennes noires, sans taches. Thorax noir avec deux petites stries jaunes interrompues sur le prothorax. Ailes transparentes, incolores; pattes fauves avec les cuisses noires; abdomen noir avec le bord fauve; le premier segment ayant une bande et les autres trois taches postérieures jaunes. Dessous sans taches avec le bord postérieur des segments brunâtre.

"Long. 16 mm. Du Cap."

3. *Myzine pacificatrix*, Cam.

Plesia pacificatrix, Cam., Ann. Transvaal Museum, II, p. 118 (1910), ♂.

4. *Myzine transvaalensis*, Cam.

Plesia transvaalensis, Cam., Ann. Transvaal Museum, II, p. 119 (1910), ♂.

Myzine (Pseudomeria) neavei, Turn.

Myzine (Pseudomeria) neavei, Turn., Ann. and Mag. Nat. Hist. (8), VIII, p. 614 (1911), ♀.

This is the only Ethiopian species known to me in which the stigma is as near to the base of the wings as in *M. (Pseudomeria) graeca*, Saund. But so many intermediate forms occur between this and the ordinary species with wings fitted for flight that I do not think that any

satisfactory distinction can be drawn from this character. In *M. infradentata*, Turn., and *M. perornata*, Turn., the wings are too short to be used for flight, also in *M. pernicioso*, Turn., in which the third cubital cell is absent.

Myzine pernicioso, sp. n.

♀. Nigra, nitida; pronoto rufo; mandibulis, antennis tarsisque fusco-testaceis; alis subhyalinis, brevissimis, thorace brevioribus, cellulis cubitalibus secundo tertioque oblitteratis.

Long. 5 mm.

♀. Mandibles with a blunt tooth on the inner margin before the apex. Head slightly convex, a little broader than long, slightly rounded at both the anterior and posterior angles, smooth and shining; eyes elongate ovate; ocelli very small, situated in a triangle on the vertex; the posterior margin of the head with a fringe of short whitish hairs; interantennal prominence bilobed. Thorax narrower than the head, smooth and shining, pleurae very minutely punctured; pronotum longer than broad, slightly narrowed and rounded anteriorly; scutellum narrowly truncate at the apex, longer than the mesonotum. Median segment a little longer than the scutellum, smooth, subopaque, the sides microscopically striated, steeply sloped posteriorly. Abdomen smooth and shining, the petiole as long as the second joint of the posterior tarsi, the apical segment narrowly rounded at the apex. Sting when exerted nearly as long as the abdomen. Wings very short, the forewings no longer than the thorax without the median segment; the stigma situated at about two-fifths from the base of the wing, the neuration beyond the stigma absent, so that the second and third cubital and second discoidal cells are missing.

Hab. CAPE COLONY, Algoa Bay (*Dr. Brauns*), January.

Myzine perornata, Turn.

Myzine (*Pseudomeria*) *perornata*, Turn., Ann. and Mag. Nat. Hist. (8), I, p. 499 (1908), ♂.

Hab. ORANGE FREE STATE, Dewetsdorp (*Dr. Brauns*).
The type is from Piet Retief.

Myzine infradentata, sp. n.

♀. Nigra, politissima; segmento mediano opaco, crasse punctato; mesopleuris rugosis; alis fusco-cyaneis, brevissimis; mandibulis apice bidentatis, apice subtus dente verticali instructis.

Long. 17 mm.

♀. Mandibles rather stout, bidentate at the apex, the inner tooth short and blunt; a strong tooth on the outer side of the mandibles and at right angles to them originating from the base of the outer tooth. Palpi fairly stout, maxillary palpi six jointed, labial palpi four jointed. Head rectangular, more than half as broad again as long, shining, with a few scattered punctures; the eyes elongate ovate, touching the base of the mandibles, ocelli in a broad triangle on the vertex; the frontal tubercles above the base of the antennae well developed, separated by a shallow, short, longitudinal sulcus. Antennae twelve jointed, the first joint of the flagellum almost concealed in the apex of the scape. Thorax smooth and shining, mesopleurae rugose, propleurae punctured-rugose; pronotum fully half as broad again as long, narrower than the head; mesonotum scarcely as long as the scutellum. Median segment scarcely longer than the scutellum, subopaque, closely and coarsely punctured; the posterior slope steep, smooth at the base, coarsely punctured at the apex. Abdomen smooth and shining, sixth dorsal segment finely aciculate, rounded at the apex. Wings short, the costa of the forewing about equal in length to the thorax and median segment combined, the stigma situated at one-third from the base.

Hab. ORANGE FREE STATE, Bothaville (*Dr. Brauns*), October.

This fine species may be easily distinguished by the structure of the mandibles. Superficially it resembles *Myzine klugii*, Westw., but in that species the wings are very much longer and less brilliant. The large third cubital cell is present in this species as in typical *Myzine*, but the nervures are rather ill defined; the second cubital cell is absent.

Myzine klugii, Westw.

Meria klugii, Westw., Proc. Zool. Soc. London, III, p. 53 (1835), ♀.

Myzine nigrita, Turn., Trans. Ent. Soc. London, p. 391 (1910), ♂.

According to Dr. Brauns these are sexes of one species, appearing early in September before other species of the group.

Myzine rufosplendida, sp. n.

♀. Nigra, nigro-pubescens, nitida, sparse punctata; fronte, vertice pronotoque antice late rufis; alio fusco-caeruleis; segmento mediano

dense punctato; pygidio tenuiter punctato-striato; tibiis tarsisque anticis fusco-ferrugineis.

Long. 16 mm.

♀. Mandibles stout, simple, without teeth. Head subrectangular, about half as broad again as long, shining and almost smooth, the clypeus and the space between the eyes and the base of the antennae closely punctured; the prominences above the base of the antennae well developed, a short, shallow, longitudinal sulcus on the front. Pronotum more than half as long again as broad, smooth and shining, the pleurae sparsely punctured; mesonotum and scutellum smooth and shining; median segment coarsely and closely punctured, with a short carina from the base, the posterior slope almost smooth in the middle. Petiole as long as the penultimate joint of the posterior tarsi; abdomen smooth and shining, the apical dorsal segment finely longitudinally punctured striate. The neurulation is not quite as in normal *Myzine*, the usual petiolate second cubital cell being absent, owing to the loss of the second transverse cubital nervure. Beyond the stigma the forewing is brightly glossed with blue; the base of the forewing and the hindwing are more feebly glossed with purple.

Hab. ORANGE FREE STATE, Bothaville (*Dr. Brauns*), January.

Myzine multipicta, sp. n.

♀. Nigra, nitida, nigro-pubescent; pronoto, mesonoto, propleurisque rufo-ferrugineis; segmentis dorsalibus 2-5 macula magna transversa utrinque, segmentis primo quinq[ue] macula parva laterali utrinque albido-flavis; alis fusco-hyalinis, venis nigris.

Long. 12 mm.

♀. Mandibles stout, without teeth; clypeus transverse at the apex. Interantennal prominence well developed and strongly bilobed; antennae not very stout, the third joint of the flagellum distinctly longer than the second, the first concealed. Head subrectangular, distinctly broader than long, smooth and shining, the cheeks as broad as the eyes, ocelli in a wide triangle, the posterior pair at least as far from the posterior margin of the head as from each other. Thorax smooth, a few large punctures on the scutellum and pleurae; pronotum twice as broad as long, narrower than the head. Median segment smooth and shining, steeply sloped posteriorly, with a sulcus from the base to the apex, the sides and extreme apex of the segment striated. Abdomen smooth and shining, with a few scattered punctures on the ventral surface; apical dorsal segment broadly rounded. Wings large, reaching to the fifth dorsal segment, the costa of the forewing

fully half as long again as the thorax and median segment combined ; second cubital cell present, triangular, petiolate ; stigma situated just before the middle of the costa.

Hab. CAPE COLONY, Willowmore (*Dr. Brauns*).

Allied to *erythrocephala*, Fabr., but differs in the greater length of the head ; the colour of the pubescence, also of the head and thorax ; the more arched slope of the median segment and the sparser puncturation.

Myzine limata, Sm.

♀. Nigra, nitida, albido-pilosa ; mandibulis basi antennisque fusco-ferrugineis ; abdomine pallide ferrugineo, segmentis secundo tertioque macula parva albida utrinque ; pedibus fuscis, tarsis testaceis ; alis hyalinis, venis tegulisque testaceis ; cellula cubitali secunda oblitterata.

Long. 4-5 mm.

♀. Mandibles without teeth, acute at the apex ; head rather small, about one quarter broader than long, slightly rounded at the angles, scarcely convex, smooth and shining, the cheeks no broader than the eyes. Antennae not slender, the third joint of the flagellum no longer than the second. Thorax shining, very sparsely punctured ; pronotum a little broader than long, slightly narrowed anteriorly, the posterior margin broadly smooth. Median segment smooth and shining, with a few long hairs springing from punctures on the lateral margins, the sides of the segment smooth and shining, the dorsal surface slightly convex and without a sulcus. Abdomen shining, very sparsely punctured, segments 2-5 with a raised curved mark on each side at the base. Wings much longer than the thorax and median segment combined ; the second cubital absent owing to the loss of the second transverse cubital nervure ; the stigma not very large, situated at about two-fifths from the base of the wing.

Hab. ALGOA BAY (*Dr. Brauns*), November ; Caia, Zambesi River (*Dr. Swale*), July.

A variety has the segments of the abdomen clouded with black in the middle.

Myzine inconspicua, sp. n.

♀. Nigra, albopilosa, nitida ; segmentis dorsalibus secundo tertioque macula albida utrinque ; mandibulis tarsisque brunneo-ferrugineis ; calcaribus albidis ; alis pallide fusco-hyalinis.

Long. 6 mm.

♀. Mandibles with a very small tooth on the inner margin near

the apex. Head a little broader than long, rounded at the angles, smooth and shining, with a distinct frontal sulcus and a few large punctures near the eyes; the tubercles at the base of the antennae moderately developed, the third joint of the flagellum very little longer than the second. Thorax smooth and shining, the pronotum nearly twice as broad as long, rather closely punctured on the anterior margin, pleurae sparsely punctured. Median segment shining, sparsely and finely punctured, with a shallow median sulcus, the sides of the segment shining and microscopically striated. Abdomen shining, with a few minute punctures. Wings a little longer than the head, thorax and median segment combined; second cubital cell very small, only half as high as its petiole, stigma situated just before the middle of the costa.

Hab. CAPE COLONY, Port Elisabeth (*Dr. Brauns*), March.

Near *M. umbratica*, Turn., but differs in the reduced size of the second cubital cell, in the colour of the pubescence, in the distinct frontal sulcus, and in the different sculpture of the pronotum and median segment.

Myzine quadrata, sp. n.

♀. Nigra, nitida, nigro-pilosa; capite, prothorace tegulisque rufis; segmentis abdominalibus 2-4 macula laterali utrinque albida; pedibus fuscis, tarsis rufo-testaceis; alis fusco-hyalinis; venis nigris, basi fusco-testaceis.

Long. 10 mm.

♀. Mandibles without teeth; head subquadrate, slightly rounded at the posterior angles, a little broader than long, smooth and shining, the posterior ocelli as far from the posterior margin of the head as from each other, the tubercles at the base of the antennae moderately developed, the third joint of the flagellum scarcely longer than the second. Thorax very sparsely punctured, the pronotum a little broader than long, pleurae sparsely punctured; median segment smooth and shining, longer than the scutellum and postscutellum combined, obliquely sloped posteriorly, the dorsal surface with a well-marked median sulcus, the surface of the posterior slope subopaque and not quite smooth, a few very fine and indistinct striae on the sides of the segment. Abdomen smooth and shining. Second cubital cell present, the stigma situated a little before the middle of the costa, the forewing about as long as the head, thorax and median segment combined.

Hab. CAPE COLONY, Willowmore (*Dr. Brauns*), January.

Myzine rufifrons, Fabr.

Larra rufifrons, Fabr., Ent. Syst., II, p. 222 (1793), ♀.

Myzine (*Meira*) (*sic!*) *violaceipennis*, Cam., Rec. Albany Mus., I, p. 301 (1904), ♀.

Myzine (*Meira*) (*sic!*) *erythrostomus*, Cam., Ann. Transv. Mus., II, p. 117 (1910), ♀.

♂. Niger, albopilosus; mandibulis basi, clypeo, pronoto marginibus, segmentis ventralibus 2-6 fasciis apicalibus late emarginatis, dorsalibus 1-6 fasciis apicalibus bisinuatis; septimo macula magna utrinque, femoribus apice, tibiis tarsisque flavis; alis hyalinis, venis nigris, stigmate testaceo.

Long. 19-21 mm.

♂. Clypeus narrowly and shallowly emarginate at the apex. Antennae shorter than the head, thorax and median segment combined, of even thickness throughout. Eyes widely and not very deeply emarginate. The whole insect closely and not very finely punctured. Pronotum shorter than the mesonotum, the anterior margin straight. First dorsal segment more than twice as broad as long, rounded anteriorly, not globular; the other segments slightly constricted at the base, the yellow apical bands less strongly punctured than the base. Incision of the seventh dorsal segment triangular, about as deep as the breadth at the apex. Second and third abscissae of the radius about equal in length, the fourth much longer; position of the second recurrent nervure rather variable, sometimes almost interstitial with the second transverse cubital nervure, sometimes received as far as one-quarter from the base of the third cubital cell.

Hab. S. AFRICA, as far north as Salisbury.

The males in the British Museum are from Johannesburg and Salisbury. They are very near *M. abdominalis*, Guér. (= *continua*, Cam.), but the incision of the apical segment is a little deeper and the anterior margin of the pronotum is straight.

Although the sexes have not been taken in copulâ, I think there can be little doubt that they belong to one species. In females from Willowmore the usual red colour of the head is considerably obscured. In *M. abdominalis*, Guér., ♀, the colour of the head varies from black to ferruginous red.

Myzine capicola, sp. n.

♂. Niger, robustus, albopilosus ; pronoto linea utrinque margine anteriore, fascia angusta margine posteriore, tegulis macula, segmento dorsali primo macula apicali utrinque, segmentisque 2-6 maculis tribus transversis apicalibus flavis ; segmento dorsali septimo apice lateribusque late rufo ; mandibus fusco-ferrugineis ; tibiis tarsisque rufo-testaceis, flavo-variegatis ; alis hyalinis, venis nigris, stigmate fusco-testaceo.

Long. 18 mm.

♂. Clypeus widely and shallowly emarginate at the apex, closely punctured. Antennae stout, of even thickness throughout, a little longer than the head, thorax and median segment combined. Eyes widely and very shallowly emarginate on the inner margin. The whole insect closely and not very finely punctured, more coarsely on the front than elsewhere. Pronotum shorter than the mesonotum, not much narrowed anteriorly, the anterior margin emarginate, the posterior margin widely arched. Median segment steeply sloped posteriorly. First abdominal segment broad, obliquely sloped anteriorly to the petiole, the surface of the slope slightly concave. First ventral segment with a distinct tubercle beneath at the base of the oblique apical truncation. Abdomen broad, the segments strongly depressed at the base ; seventh dorsal segment flattened on the apical portion, the incision as deep as its apical breadth, the lateral processes pointed. Second abscissa of the radius long, a little longer than the third ; second recurrent nervure received at about one-eighth from the base of the third cubital cell.

Hab. CAPE OF GOOD HOPE.

Type in B. M.

This fine species may be distinguished by the tubercles on the first ventral segment, the black clypeus, the red apical segment and the short first dorsal segment with the slightly concave anterior slope. The colour somewhat resembles *M. haemorrhoidalis*, Guér., but the description does not altogether agree.

Myzine kristenseni, sp. n.

♂. Niger, sparse albopilosus ; mandibulis basi, pronoto macula utrinque margine anteriore, tegulis basi, segmentis dorsalibus 2-6 maculistribus transversis apicalibus, tarsisque flavis ; antennis fuscis ; alis hyalinis, venis nigris, stigmate fusco,

Long. 7 mm.

♂. Clypeus narrowly and very shallowly emarginate at the apex, closely punctured. Antennae stout, a little thickened towards the apex, the third joint of the flagellum longer than the second. Eyes widely, but very shallowly, emarginate. The whole insect closely and rather deeply punctured, rather more sparsely on the abdomen than elsewhere. Pronotum not narrowed anteriorly, shorter than the mesonotum, the anterior margin straight. Median segment short, very steeply sloped posteriorly, the dorsal surface marked with a shallow longitudinal groove. First dorsal segment short and broad, obliquely sloped anteriorly to the petiole. Abdominal segments distinctly constricted at the base; the incision of the apical segment much broader at the apex than deep, the lateral processes short and pointed. Third cubital cell small, less than half as long as the second both on the radius and on the cubitus; second recurrent nervure received at the middle of the third cubital cell.

Hab. S. ABYSSINIA, Harar (*G. Kristensen*).

Type in B. M.

Myzine consanguinea, sp. n.

♂. Niger, gracilis, albopilosus; mandibulis basi, clypeo, pronoto margine anteriore fascia late interrupta, margine posteriore fascia arcuata, tegulis, segmento dorsali primo macula parva apicali, segmentis 2-5 maculis tribus transversis apicalibus, sexto fascia bisinuata apicali, segmentis ventralibus 2-5 macula parva angulis apicalibus, femoribus apice, tibiis anticis intermediisque extus tarsisque pallide flavis; segmentis abdominalibus primo secundoque rufis; alis hyalinis, venis nigris, stigmatibus testaceo.

Long. 9 mm.

♂. Clypeus shallowly emarginate at the apex; antennae stout, of even thickness throughout, as long as the head, thorax and median segment combined. Eyes widely and rather shallowly emarginate on the inner margin; the frontal prominence between the antennae shallowly emarginate. Head, thorax and median segment closely and rather finely punctured; pronotum a little shorter than the median segment, slightly narrowed anteriorly, the anterior margin straight, the posterior margin widely but not deeply emarginate. Median segment rounded, the dorsal surface slightly convex. First abdominal segment subglobular, slightly constricted at the apex, the portion beyond the short petiole broader than long. All the segments shining and rather sparsely punctured. Incision of the seventh dorsal segment triangular, a little wider at the apex than deep, the lateral processes narrowly rounded at the apex. Second abscissa of the radius a little longer than the third, second recurrent

nervure received just before one quarter from the base of the third cubital cell.

Hab. ZAMBESI, Caia (*Dr. Swale*), August.

Type in B. M.

In colour this approaches *M. rufonigra*, Bingh., but is a smaller and much less robust species.

Myzine basutorum, sp. n.

♂. Niger, gracilis, albopilosus; mandibulis basi, clypeo, pronoto margine anteriore fascia anguste interrupta, margine posteriore fascia arcuata, tegulis, mesopleuris macula magna subtriangulari antice, segmentis dorsalibus 1-6 fasciis apicalibus profunde bisinuatis, septimo macula magna utrinque, segmentis ventralibus 2-6 fasciis apicalibus bisinuatis, femoribus subtus, tibiis tarsisque pallide flavis; alis hyalinis, venis nigris, stigmatibus testaceo.

Long. 13 mm.

♂. Clypeus short and broad, widely and shallowly emarginate at the apex; antennae stout, of even thickness throughout, a little shorter than the head, thorax and median segment combined. Eyes broadly and not very deeply emarginate. Head, thorax and median segment very closely punctured and rather thickly clothed with long white pubescence. Pronotum shorter than the mesonotum, scarcely narrowed anteriorly, the anterior margin widely emarginate, the posterior margin broadly arched. Median segment steeply sloped posteriorly, the dorsal surface slightly convex. First abdominal segment beyond the petiole nearly twice as broad as long, not swollen or constricted at the apex. Abdomen finely and not very closely punctured, slender, the incision of the seventh dorsal segment as deep as the apical breadth. Third abscissa of the radius longer than the second; second recurrent nervure interstitial with the second transverse cubital nervure, which is strongly curved inwards near the radius.

Hab. BASUTOLAND (*E. Crawshaw*). Three males.

Type in B. M.

Myzine impetuosus, sp. n.

♂. Niger, albopilosus; mandibulis, clypeo, pronoto marginibus, anteriore anguste interrupto, tegulis, mesopleuris macula magna triangulari antice, segmentis dorsalibus 1-6 fasciis apicalibus lateribus dilatatis, septimo macula magna utrinque, ventralibus 3-5 fasciis latis, secundo sextoque fasciis bisinuatis, femoribus apice, tibiis tarsisque flavis.

Long. 13 mm.

♂. Clypeus very shallowly emarginate at the apex. Antennae stout, of even thickness throughout, as long as the head, thorax and median segment combined. Eyes rather strongly emarginate. Pronotum short, the anterior margin straight. Head, thorax and median segment closely punctured and rather closely clothed with long greyish white pubescence. Abdomen shining and very sparsely punctured, thinly clothed with white pubescence; the first segment about three times as broad as long on the dorsal surface, somewhat rounded anteriorly; the other segments very slightly constricted at the base; the incision of the seventh dorsal segment as deep as the apical breadth, the lateral processes rounded at the apex. Second abscissa of the radius a little shorter than the third, second recurrent nervure received at about one-sixth from the base of the third cubital cell.

Hab. BRITISH EAST AFRICA, foot of Kikuyu Escarpment, near Naivasha, 7,300 ft. (*S. A. Neave*), March.

Type in B. M. Described from two specimens.

Elis (Mesa) donaldsoni, Fox.

Cosila donaldsoni, Fox, Proc. Acad. Philadelphia, p. 549 (1896), ♀.

Elis aliciae, Turn., Proc. Zool. Soc. London, p. 704 (1912), ♀.

From information received from Prof. Fernald of Massachusetts, I have no doubt that Fox was quite mistaken in placing his species in *Cosila*. As noticed in my remarks on the species in my paper quoted above, the description agrees well with *Elis aliciae*, which must sink as a synonym. Fox was probably not acquainted with any of the Old World species of *Elis*.

Elis (Mesa) coeruleipennis, sp. n.

♀. Nigra, albopilosa, crasse punctata; alis fuscis caeruleo-tinctis. Long. 14 mm.

♀. Clypeus short, finely punctured, with a low carina from the base not reaching the apex. Head deeply, but not very closely, punctured, the space round the ocelli shining and very sparsely punctured. Scape sparsely punctured, flagellum clothed with very fine greyish pubescence. Thorax deeply, but rather sparsely punctured; median segment scabrous, with a distinct median groove the edges of which are raised into distinct carinae, the apex of the segment margined, the surface of the posterior truncation coarsely

punctured, the sides of the segment finely striated. Abdomen shining, rather closely punctured, more finely at the base of the segments than at the apex, the sixth dorsal segment finely longitudinally striated. Basal joint of the posterior tarsi with a scopula of white hair beneath. Third abscissa of the radius about twice as long as the second; first recurrent nervure received just beyond the middle of the second cubital cell, second just beyond the middle of the third cubital cell.

Hab. UGANDA PROTECTORATE, between Kumi and N. E. shore of Lake Kioga, 3,400–3,600 ft. (*S. A. Neave*), August. Type in B. M.

Nearly allied to *xanthocera*, Gerst., from which it differs in the colour of the antennae, the rather more sparse puncturation and the finer puncturation of the abdomen.

Elis (Mesa) nyanzae, sp. n.

♂. Niger, gracilis, albopilosus; tibiis anticis extus, tarsis anticis, tegulis basi, segmentisque dorsalibus 2–5 fasciis angustis apicalibus late bisinuatis pallide flavis; alis hyalinis, venis nigris.

Long. 17 mm.

♂. Clypeus and front clothed with long silvery pubescence. Front rugosely punctured, vertex coarsely punctured, a deep transverse sulcus above the posterior ocelli. Eyes very widely and shallowly emarginate. Antennae longer than the head, thorax and median segment combined, the apical joints a little more slender than the basal. Pronotum a little shorter than the mesonotum, the anterior margin straight and slightly raised, rather finely and closely punctured. Mesonotum and scutellum more coarsely punctured than the pronotum; median segment punctured-rugose. Scutellum with an obscure median carina. Abdomen slender; first abdominal segment about twice as long as the second, the petiole with a median groove occupying the basal third of the segment, which is considerably swollen on the apical portion, but not nodose or strongly constricted at the apex. The whole abdomen closely and finely punctured; second segment about one-third longer than the third, as broad at the apex as long, narrowed to the base. Seventh dorsal segment with a distinct elongate oval pygidial area, very shallowly emarginate at the apex. Third abscissa of the radius longer than the second, more than twice as long as the fourth; second recurrent nervure received just beyond one-quarter from the base of the third cubital cell.

Hab. EAST VICTORIA NYANZA, Lusinga Island (*S. A. Neave*), April 25, 1911.

Type in B. M.

Allied to *ametalla*, Turn., and *asmarensis*, Turn., but the first abdominal segment is distinctly shorter and more robust. In *ametalla* there is no distinct pygidial area, and in *asmarensis* it is less clearly defined and marked with a very strong longitudinal carina.

Sub-family TIPHIINAE.

Tiphia tegularis, sp. n.

♀. Nigra, robusta, crasse sed haud dense punctata; antennis dimidio basali fulvo-brunneis; alis fusco-caeruleis; tegulis maximis, elongatis; segmento mediano brevi; segmento dorsali primo basi carinato.

♂. Feminae simillimus.

Long. ♀, 15 mm.; ♂, 13 mm.

♀. Mandibles with a very ill-defined blunt tooth on the inner margin near the apex. Clypeus short, sparsely punctured, narrowly and shallowly emarginate at the apex. Antennae very stout, not strongly curved, the three basal joints of the flagellum broader than long, the scape short and stout, the apical joint of the flagellum elongate conical, almost pointed, longer than the penultimate. Head and thorax shining, coarsely but not very closely punctured; the posterior margin of the pronotum narrowly smooth; dorsulum very sparsely punctured. Tegulae large and long, reaching beyond the middle of the scutellum, the base smooth and shining, the apex sub-opaque and punctured. Median segment more than twice as broad as long, scarcely longer than the scutellum, opaque, the three carinae in the middle strongly marked, the middle one not reaching the apex, the outer ones nearly parallel, a little further apart in the middle than at the extremities, the sides and apex of the segment distinctly margined, the sides of the segment finely striated. Abdomen strongly but not closely punctured; the first segment broadly truncated at the base, with a strong, transverse, basal carina; second segment with a broad, transverse, longitudinally striated groove at the base; sixth dorsal segment closely punctured at the base, the punctures more or less confluent longitudinally, smooth and broadly rounded at the apex; second ventral segment very sparsely punctured. Spur of posterior tibia half as long as the basal joint of the posterior tarsus. Second recurrent nervure received just before two-thirds from the base of the second cubital cell. The tarsal ungues are bifid and also have a blunt lobe near the base. The posterior margin of the pronotum is broadly and almost regularly arched, but rather more deeply indented in the middle.

TRANS. ENT. SOC. LOND. 1912.—PART IV. (FEB.) 3 D

♂. The four apical joints of the antennae only are black ; the abdomen is more closely punctured than in the female ; the two outer carinae on the median segment converge a little towards the apex. The radial cell does not extend beyond the second cubital cell and is obliquely truncate at the apex.

Hab. TRANSVAAL, Lichtenberg (*Dr. Brauns*), January. Near *scabrosa*, Gerst., but is much less densely punctured.

Tiphia incrassata, sp. n.

♀. Nigra, albopilosa, punctata ; mandibulis fuscis ; antennis fusco-ferrugineis ; alis fuscis, obscure caerulescentibus ; segmentis abdominalibus albofimbriatis.

Long. 11–12 mm.

♀. Clypeus widely and shallowly emarginate at the apex. Head and mesopleurae closely and coarsely punctured. Pronotum rather closely punctured, broadly smooth and shining posteriorly, the arch of the posterior margin almost transverse in the middle ; mesonotum and scutellum sparsely punctured. Median segment short, nearly twice as broad as long, widely and shallowly emarginate at the apex, the sides and apex distinctly margined, subopaque, finely and indistinctly punctured, with the usual three longitudinal carinae, the middle one not quite reaching the apex, the outer two strongly convergent towards the apex, almost twice as far from each other at the base as at the apex, the sides of the segment closely striated, the surface of the posterior truncation finely shagreened and slightly concave. Abdomen shining, rather sparsely punctured on the two basal segments, more closely on the others ; the basal segment short, truncate at the base and with a distinct transverse carina ; the apical dorsal segment irregularly longitudinally striated, broadly rounded and testaceous at the apex. Spur of the hind tibia fuscous, sharply pointed, and nearly as long as the basal joint of the hind tarsus. The tegulae are long, reaching beyond the middle of the scutellum, smooth at the base, finely punctured at the apex. Second recurrent nervure received just before two-thirds from the base of the second cubital cell ; second transverse cubital nervure with a double curve.

Hab. TRANSVAAL, Johannesburg (*Kobrow*). In coll. Brauns.

Tiphia montivaga, sp. n.

♀. Nigra ; antennis mandibulisque fusco-ferrugineis ; femoribus, tibiis tarsisque laete ferrugineis ; alis fusco-hyalinis, venis fuscis.

Long. 13–14 mm.

♀. Clypeus broadly rounded at the apex, punctured at the base,

the apical margin narrowly smooth. Apical joint of the flagellum no longer than the penultimate. Head finely and sparsely punctured, more closely on the front than on the vertex. Pronotum very sparsely punctured, shining, broadly smooth posteriorly, the arch of the posteriorly margin almost transverse on the median portion; propleurae smooth and shining. Mesonotum and scutellum shining, very sparsely punctured, mesopleurae finely and more closely punctured. Median segment less than twice as broad as long, shining, very shallowly and sparsely punctured, the three longitudinal carinae parallel and rather low, the two outer ones separated by a distance equal to about two-fifths of their length; the sides of the segment shining and indistinctly striated. Abdomen shallowly and sparsely punctured; the fourth and fifth segments more closely punctured; the basal segment broadly rounded at the base, without a carina; the second segment transversely depressed at the base; pygidium punctured rugose on the basal half, ferruginous and very minutely punctured at the apex. Second recurrent nervure received at about three-fifths from the base of the second cubital cell. Tegulae large, longer than broad, smooth and shining.

Hab. UGANDA PROTECTORATE, Mt. Kokanjaro, S.W. of Mt. Elgon 6,400 ft. (*S. A. Neave*), August 7-9.

Type in B. M. 4 ♀ ♀.

Allied to *T. massaica*, Cam., in the sparse puncturation, but in that species the wings are hyaline and very iridescent, with black nervures and the details of the sculpture are different.

Sub-family ANTHOBOSCINAE.

Anthobosca rufocaudata, sp. n.

♀. Nigra, albopilosa, punctata; mandibulis fusco-ferrugineis; segmentis dorsalibus quinto sextoque, ventralibus quarto, quinto sextoque rufo-ferrugineis; calcaribus albis; alis hyalinis, venis nigris; cellula radiali apice subacuta.

♂. Niger, albopilosus; mandibulis basi, clypeo, margine interiore oculorum anguste, pronoto margine posteriore, tegulisque pallide flavis; pedibus nigris, flavo-variegatis; alis hyalinis, iridescentibus, venis nigris; clypeo apice acute bidentato; unguiculis bifidis.

Long. ♀, 6-8 mm.; ♂, 7-8 mm.

♀. Clypeus short, with a low median carina, the apical margin depressed. Head rather sparsely punctured, more deeply on the front than on the vertex. Thorax rather sparsely punctured, median segment very finely and closely punctured. Abdomen minutely punctured, seventh dorsal segment finely aciculate, smooth

and broadly rounded at the apex. Sides of the median segment smooth. Apical half of the posterior femora broadly rounded beneath; basal joint of posterior tarsi with a comb of about ten short bristle-like spines beneath. Tarsal unguis bifid. Radial cell subacute at the apex, no longer on the costa than the large stigma; third abscissa of the radius longer than the first and second combined; first recurrent nervure received a little beyond the middle of the second cubital cell, second at the middle of the third cubital cell, which is longer on the radius than on the cubitus.

♂. Mandibles bidentate at the apex, the inner tooth shorter than the outer. Clypeus with two strong black teeth at the apex. Antennae stout, of almost even thickness throughout, shorter than the thorax and median segment combined. Head finely punctured; thorax very finely and closely punctured; abdomen finely shagreened. Posterior tibiae with five spines on the outer margin; tarsal unguis bifid. Third abscissa of the radius longer than the first and second combined, third cubital cell longer on the radius than on the cubitus; recurrent nervures as in the female. First abdominal segment nearly half as long again as the second. Hypopygium rather narrowly linguiform.

Hab. CAPE COLONY, Willowmore (*Dr. Brauns*), September and October.

The female is the type.

The male resembles the species for which Cameron formed the genus *Odontothynnus*. I have no doubt, however, that he is mistaken in the statement that the unguis of the hind tarsi are simple. In colour the female resembles "*Plesia*" *melanaria*, Cam., which will probably prove to be the female of one of the males described by him under *Odontothynnus*.

Anthobosca natalica, Turn.

Anthobosca natalica, Turn., Trans. Ent. Soc. London, p. 85 (1908), ♀.

This species also occurs at Willowmore, Cape Colony, in January.

Sub-family SCOLIINAE.

Scolia (Triclis) braunsi, sp. n.

♀. Nigra, cinereo-pilosa; mandibulis basi, flagello, tibiis subtus tarsisque fusco-ferrugineis, alis fuscis, venis nigris; segmentis abdominalibus nigro-ciliatis.

Long. 17 mm.

♀. Clypeus short, very broadly rounded at the apex, punctured at the sides, the middle raised and flattened, marked with three very strong longitudinal carinae, with one or two lower carinae between them. Head sparsely punctured, antennae inserted almost as far from each other as from the eyes; the frontal prominence between them very broadly triangular, bounded laterally by well-marked carinae, at the base by a smooth transverse groove which almost reaches the eyes. Vertex very sparsely punctured, a large smooth space round the anterior ocellus. Pronotum closely and rather coarsely punctured, mesonotum and scutellum sparsely punctured; median segment closely and coarsely punctured, the surface of the posterior truncation smooth. Pubescence black on the dorsal surface of the thorax and abdomen, more or less cinereous on the sides, very sparse. Abdomen finely and rather sparsely punctured, the dorsal segments with sparse ciliae of black hairs at the apex; the sixth dorsal segment broadly rounded at the apex, coarsely punctured and clothed with short *fulvous setae*. Ciliae of the ventral segments sparse and whitish. Third cubital cell pointed on the cubital nervure, the length on the radial nervure equal to nearly two-thirds of the length of the second transverse cubital nervure. Radial cell extending beyond the third cubital cell. Spines of the hind tibiae pointed.

Hab. CAPE COLONY, Willowmore (*Dr. Brauns*), December.

Allied to *Scolia* (*Trielis*) *punctum*, Sauss., but differs much in the colour of the wings and pubescence, and in the less closely striated clypeus. It differs from *techowii*, Turn., in the same points of colour, also in the sculpture of the median segment and sixth dorsal segment.

Scolia (*Dielis*) *clotho*, Sauss.

Elis (*Campsomeris*) *clotho*, Sauss., Stett. Ent. Zeit., XX, p. 263 (1859), ♀.

Dielis masaiica, Cam., Sjöstedt's Kilimandjaro-Meru Exp., II, p. 229 (1910), ♀.

In Cameron's type the wings are somewhat paler than is usual, but it is undoubtedly identical.

Scolia (*Dielis*) *coelebs*, Sich.

Elis (*Dielis*) *coelebs*, Sich., Cat. Spec. gen. *Scolia*, p. 184 (1864), ♀.

Dielis erionotus, Cam., Trans. S. Afric. Phil. Soc., XV, p. 211, ♂.

Family POMPILIDAE.

Cyphononyx basalis, Sm.

Pompilus basalis, Sm., Cat. Hym. B. M., III, p. 138 (1885), ♀.
Cyphononyx earoli-waterhousei, Cam., Sjöstedt's Kilimandjaro-Meru Exp., II, p. 241 (1910).

Family CRABRONIDAE.

Sub-family PHILANTHINAE.

Philanthus histrio, Fabr., Syst. Piez., p. 301 (1804).
Philanthus flavolineatus, Cam., Sjöstedt's Kilimandjaro-Meru Exp., II, p. 271 (1910).

It is singular that Cameron should describe this common and wide-ranging East African species as new, without any note of comparison.

Cerceris vigilans, Sm., sub-sp. *pervigilans* sub-sp. n.

♀. Differs from Indian specimens in having the postscutellum yellow instead of black; the enclosed area at the base of the median segment is finely granulate instead of finely and closely punctured; the pygidial area is more strongly narrowed towards the apex; the petiole of the second cubital cell is a little longer; and the wings are sub-hyaline at the base, with a distinct fuscous apical border.

♂. The differences in the male are the same as in the female, but the pygidial area is narrower throughout than in typical *vigilans*.

Hab. BRITISH EAST AFRICA, Kirja Valley, S. Kavirondo, 4,000 ft., April 30—May 1; Simba, 3,500 ft., May 8 (*S. A. Neave*).

Type in B. M. 1 ♀, 3 ♂ ♂.

The differences seem to me to be too small to be of full specific value, the most important being in the shape of the pygidial area. The rather remarkable form of the clypeus is identical. Yet *vigilans* is an Indian species, not recorded from intermediate localities.

Cerceris yalensis, sp. n.

♀. Nigra; clypeo, fronte sub antennis, macula pone oculos, femoribusque anticis infra flavis; abdomine, segmento basili excepto, flavo-ochraceo; alis fusco-hyalinis; segmento ventrali secundo area

basali elevata nulla ; segmento mediano area basali longitudinaliter striata.

♂. Feminae similis ; segmento mediano area basali obscure transverse striata, segmento ventrali sexto angulis apicalibus valide dentato.

Long. ♀, 14 mm.; ♂, 11 mm.

♀. Clypeus broad, the middle lobe more than half as broad again as long, the anterior margin almost transverse, very feebly quadridentate, the distance between the base of the clypeus and the antennae equal to about half the length of the clypeus ; inter-antennal carina high and narrow, triangularly truncate at the apex ; antennae rather stout, the second joint of the flagellum distinctly longer than the third. Cheeks nearly as broad as the eyes ; posterior ocelli more than half as far again from the eyes as from each other. Clypeus and front below the base of the antennae sparsely punctured ; front above the antennae irregularly longitudinally striated, vertex closely punctured. Pleurae coarsely punctured striate ; thorax very sparsely punctured in the middle, the punctures more or less confluent on the sides of the mesonotum. Median segment strongly, but not closely, punctured, the triangular area at the base coarsely longitudinally striated. Abdomen almost smooth, the fifth segment shallowly and sparsely punctured, first dorsal segment more than twice as broad as long, the segments not strongly constricted ; pygidial area granulate, gradually narrowed from the base, narrowly rounded at the apex, less than twice as long as the basal breadth, with a fringe of short hairs on the sides. First recurrent nervure received at two-thirds from the base of the second cubital cell, second at one-quarter from the base of the third cubital cell.

♂. Head and thorax closely and rather deeply punctured, sparsely on the clypeus and front below the base of the antennae ; middle lobe of the clypeus longer than broad, with three indistinct teeth at the apex. Apical joint of the flagellum slightly curved and truncate at the apex. Basal area of the median segment shining, with a median groove and very obscurely and transversely striated. Abdomen sparsely punctured, the basal segment not quite twice as broad as long ; sixth ventral segment with a broad tooth on each side at the apical margin ; pygidial area sparsely and coarsely punctured, twice as long as broad, the sides almost parallel, truncate at the apex. First recurrent nervure received close to the middle of the second cubital cell, second close to the base of the third cubital cell.

Hab. BRITISH EAST AFRICA, Yala River, S. edge of

Kakunga Forest, 4,800–5,300 ft., May 21–28; Uganda Protectorate, between Seziwa River and Kampala, 3,500 ft., August 27–31; Banks of the Nile near Kakindu, 3,400 ft., August 24 (*S. A. Neave*); Entebbe, Uganda, August 22 (*C. C. Gowdey*).

The difference in the sculpture of the enclosed area at the base of the median segment in the sexes is greater than is usual in the genus.

Sub-family SPHECINAE.

Sphex (*Chlorion*) *xanthocerus*, Ill., var. *unicolor*, Sauss.

Sphex unicolor, Sauss., Reise d. Novara, Zool., II, p. 37 (1867).

Sphex xanthocerus var. *unicolor*, Kohl, Ann. naturh. Hofmns. Wien, V, p. 185 (1890).

Sphex massaicus, Cam., Sjöstedt's Kilimandjaro-Meru Exp., II, p. 262 (1912).

Sub-family BEMBECINAE.

Bembex compedita, nom. nov.

Bembex kohli, Turn., Ann. and Mag. Nat. Hist. (8), IX, p. 415 (1912), ♂ (*nec* Morice, 1897).

The name *kohli* is preoccupied and must sink, as has been pointed out to me by Mr. Rohwer.

Bembex ugandensis, sp. n.

♂. Niger; mandibulis apice excepto, clypeo late marginibus, labro, orbitis oculorum, macula parva transversa utrinque sub oculo antico, pedibusque plus minusve nigro-variegatis flavis; segmento mediano linea arcuata angulisque, segmentis dorsalibus primo secundoque, apice maculisque duabus transversis nigris, segmento tertio macula transversa arcuata utrinque pallide flavo-olivaceis; oculis versus clypeum paulum divergentibus, segmento ventrali secundo tuberculo longitudinali parvo, sexto apice acute producto.

♀. Mari simillima.

Long. ♂ ♀, 23 mm.

♂. Clypeus subcarinate at the base, triangularly flattened at the apex; the eighth and ninth joints of the flagellum short and with a spine beneath, the tenth and eleventh joints concave beneath, but not broadened, the apical joint much longer than the penultimate, moderately curved, narrowed to the apex and slightly hollowed beneath at the base. Basal joint of the anterior tarsi with six spines

on the outer margin, the outer half of the joint black. Femora not serrate. Second ventral segment with a very low median carina, which is produced into a very small tubercle near the apex; sixth ventral segment strongly produced at the apex and almost pointed. Seventh dorsal segment narrowed before the apex, the sides undulate. Thorax closely and evenly punctured. Cubital cell of the hindwing emitting one vein from the apex. Angles of the median segment rather prominent.

♀. Second ventral segment shining and sparsely punctured in the middle; sixth dorsal segment strongly punctured and clothed with short black pubescence, the extreme apex smooth and narrowly rounded.

Hab. UGANDA PROTECTORATE, Eastern Mbale district, S. of Mt. Elgon, 3,700 ft.; Mbale-Kumi Road, S. of Lake Salisbury, 3,700 ft. (*S. A. Neave*), August; Entebbe (*C. C. Gowdey*).

Type in B. M.

Allied to *B. diversipennis*, Sm., but differs from that species in the much narrower apical joints of the male antennae and in the shape of the seventh dorsal segment. The sixth dorsal segment of the female is broader than in *diversipennis*. In both sexes the antennae are black, not ferruginous as in *diversipennis*, and the colour is otherwise different, though *diversipennis* is so variable in this respect that little importance can be attached to colour differences. The male antennae are somewhat intermediate between *diversipennis*, Sm., and *monedula*, Handl.

Bembex lobatifrons, sp. n.

♂. Niger; clypeo, labro, mandibulis dimidio basali, scapo supra nigro-lineato, fronte supra basim antennarum macula magna bilobata nigra, genis, linea transversa interrupta occipitali, pronoto, lateribus dorsuli strigisque parvulis in disco, scutello, postscutello, segmentoque mediano fasciis curvatis apicalibus, lateribus thoracis plus minusve nigro-lineatis, segmento dorsali primo fascia lata sinuata, secundo tertio quartoque fasciis latis bisinuatis, quinto sextoque fere totis, septimo apice anguste, segmentis ventralibus tribus basalibus fere totis, quarto, quinto sextoque fasciis latis apicalibus, pedibus, thoraceque subtus, mesosterno excepto, pallide flavis; alis hyalinis, venis bruneis.

♀. Mari simillima, fasciis segmentorum dorsalium secundi tertiique maculas nigras binas includentibus.

Long. ♂ ♀, 14 mm.

♂. Eighth and ninth joints of the antennae with a minute spine beneath, tenth to twelfth slightly excavated beneath, apical joint longer than the penultimate, distinctly curved and rounded at the apex. Fore tarsi normal, the basal joint with six spines on the outer margin, fore femora not serrate, intermediate femora with one or two small spines beneath near the apex, not distinctly serrate, basal joint of intermediate tarsi normal, intermediate tibiae not produced at the apex. Seventh dorsal segment broad, narrowly truncate at the apex, the sides not sinuate. Second ventral segment with a longitudinal carina which is gradually raised into a rounded tubercle at the apex, the surface of the segment closely and evenly punctured; sixth ventral segment with a small, low, rounded tubercle in the middle; seventh ventral segment with three longitudinal carinae placed rather far apart. Wings rather short, not reaching when closed much beyond the apex of the third dorsal segment; cell of the hindwing emitting only one distinct vein from the apex.

♀. Similar to the male except in the usual sexual characters; the sixth dorsal segment with a very large yellow apical spot, the sides not sinuate, the apex narrowly rounded. Second ventral segment evenly punctured. The colour of the female is a deeper yellow than in the male.

Hab. BRITISH EAST AFRICA, Uchweni Forest, March 1-2; Lake Mpeketomi near Kipini (*S. A. Neave*), March 4-5.

Type in B. M.

This species approaches the *oculata* group, but differs in only having one vein at the apex of the cell in the hindwing, and the carinae of the seventh ventral segment (♂) are far apart.

Sub-family NYSSONINAE.

Gorytes silverlocki, sp. n.

♀. *G. monstroso*, Handl., affinisima. Nigra; pronoto in medio interrupto, callis humeralibus, segmento dorsali secundo fascia angusta apicali, tibiis tarsisque macula basali pallide flavis; alis subhyalinis, cellula radiali obscuriore.

Long. 5 mm.

♀. Eyes strongly convergent towards the clypeus, separated at the base of the clypeus by a distance scarcely exceeding half the length of the scape; clypeus very short, the anterior margin distinctly raised. Antennae short, about as long as the thorax without

the median segment, the five basal joints of the flagellum very short and not stout, the five next longer and stouter, the apical joint longer and slenderer than the penultimate and slightly curved. Ocelli situated in a very wide triangle on the vertex, the posterior pair nearly half as far again from each other as from the eyes. Thorax short and stout, a distinct groove in front of the mesopleurae for the reception of the anterior femora, the mesosternum notched at the sides close to the groove and produced into two short teeth. Intermediate trochanters without a tooth; posterior tibiae thickened. Abdomen petiolate, the first segment gradually broadened from the base, nearly twice as wide at the apex as at the base, distinctly longer than the apical breadth, not constricted at the apex; second segment large and globose, constricted at the base; sixth segment broadly triangular, with a narrow pygidial area. Closely and rather strongly punctured; the punctures longitudinally confluent near the apex of the mesonotum; scutellum and postscutellum longitudinally striated, basal area of the median segment obliquely striated, a smooth opaque space on each side near the apex of the basal area, the posterior slope of the median segment with a deep median groove; ventral surface of the abdomen almost smooth except on the coarsely punctured second segment; the extreme apex of the sixth dorsal segment smooth. Both recurrent nervures received by the second cubital cell; second abscissa of the radius shorter than the first; third cubital cell entirely absent on the right side, on the left side the third transverse cubital nervure is present on the cubitus, but does not reach half way to the radius.

Hab. N. RHODESIA, Sinapunga (*Silverlock*), February.

Type in B. M.

Differs from *monstrosus*, Handl., in colour, in the sculpture of the scutellum, postscutellum and median segment, in the absence of a spine on the intermediate trochanters, in the shape of the petiole and in the absence of the third transverse cubital nervure. The latter character may be an individual aberration.

Sub-family CRABRONINAE.

Dasyproctus aurovestitus, sp. n.

♀. Nigra, opaca; scapo subtus, pronoto angustissime antice, petioloque macula utrinque apicali pallide flavis; pedibus nigris fusco-ferrugineo variegatis; abdomine dense auro-piloso; alis hyalinis, costa anguste infuscata, venis nigris; tegulis fusco-ferrugineis.

Long. 12 mm.

♀. Clypeus with a median carina. Head large, the eyes on the front separated by a distance not quite equal to half the length of the scape; second joint of the flagellum twice as long as the first and fully half as long again as the third. Cheeks as broad as the eyes; posterior ocelli much further from each other than from the anterior ocellus, as far from the eyes as from each other, and more than half as far again from the posterior margin of the head as from each other; the whole head minutely punctured and clothed with fine brownish gold pubescence, a deep sulcus on the inner margin of the eyes near the summit. Pronotum deeply transversely grooved, the anterior margin higher and broader than the posterior. Median segment with a deep median sulcus, the basal triangular area strongly obliquely striated, with fine punctures between the striae; the posterior slope of the segment finely rugulose. Abdomen petiolate, the first segment a little shorter than the second and third combined, as long as the posterior femur and trochanter combined, the apex not nodose, the apical breadth equal to about two-fifths of the length of the segment; the remainder of the abdomen densely clothed with short brownish gold pubescence.

Hab. UGANDA, Entebbe (*C. C. Gowdey*), August 13.

Type in B. M.

Easily distinguished from other African species by the golden brown pubescence and the almost complete absence of yellow markings on the abdomen. The sculpture of the median segment differs from *kibonotensis*, Cam., in which there are no yellow markings, and in that species the pubescence is whitish.

Sub-family LARRINAE.

Liris diabolica, Sm.

Larrada diabolica, Sm., Ann. and Mag. Nat. Hist. (4), XII, p. 294 (1873), ♀.

Liris violaceipennis, Cam., Sjöstedt, Kilimandjaro-Meru Exped., II, p. 285 (1910), ♀.

Larra (*Liris*) *opipara*, Kohl, Ann. Naturh. Hofmus. Wien., IX, p. 297 (1894), ♀.

Notogonia pseudoliris, sp. n.

♀. Nigra, dense aureo-sericea tomentosa; mandibulis basi, antennis, tegulis, pedibus, segmentisque abdominalibus quinto sextoque ferrugineis; segmentis abdominalibus 1-4 margine apicali testaceis;

alis flavo-hyalinis, limbo late infuscato; venis basi testaceis, apice fuscis.

Long. 16 mm.

♀. Clypeus almost transverse at the apex, with a very shallow and narrow emargination in the middle. Second joint of the flagellum equal in length to the third, about three and a half times as long as broad. Eyes separated on the vertex by a distance equal to the length of the second joint of the flagellum. Median segment finely transversely aciculate, with a low median carina on the basal half, much longer than the breadth at the base, the sides of the segment striated. Sixth dorsal segment closely punctured and without much pubescence. Comb of the anterior tarsi very short and with few spines, only five spines on the basal joint. Tarsal unguis long, without a tooth. Third abscissa of the radius nearly half as long again as the second. The whole dorsal surface, except the middle of the median segment and the sixth dorsal segment, clothed with short golden pubescence.

Hab. UGANDA, Entebbe (*C. C. Gowdey*), August 15.

Type in B. M.

This closely resembles a small specimen of *Liris haemorrhoidalis*, Fabr., but is a true *Notogonia*. *N. primania*, Kohl, resembles the same species, but is larger, and differs in the proportionate length of the second joint of the flagellum compared with the distance between the eyes on the vertex, in the comb of the anterior tarsi, and in the sculpture of the median segment. The antennae of *primania* are much shorter and stouter than in the present species.

Notogonia gowdeyi, sp. n.

♀. Nigra, mandibulis basi, clypeo apice, scapoque fusco-ferrugineis; tarsis anticis fuscis; alis nigro-violaceis; segmento mediano transverse rugoso-striato.

♂. Feminae simillimus.

Long. ♀, 21 mm.; ♂, 14 mm.

♀. Clypeus almost transverse at the apex, with a shallow and narrow emargination in the middle, the apical half strongly, but sparsely, punctured, the basal half finely shagreened. Second joint of the flagellum as long as the third, more than three times as long as its breadth in the middle. Eyes separated on the vertex by a distance equal to about three-quarters of the length of the second joint of the flagellum. Median segment longer than the basal breadth, coarsely transversely rugose-striate, without a median

carina, the sides of the segment finely and very obscurely striated. Sixth dorsal segment clothed with stiff blackish bristles. Comb of the anterior tarsi fairly long and stout, six spines on the basal joint; tarsal unguis long, without a tooth. Third abscissa of the radius about half as long again as the second, first recurrent nervure received very near the base of the second cubital cell, more than twice as far from the second recurrent nervure as from the angle of the cell. A little silver pubescence on the face and cheeks, abdomen bare.

♂. Antennal joints shorter than in the female, the eyes separated on the vertex by a distance equal to the length of the two basal joints of the flagellum; apex of the dorsal segment with a very indistinct marginal band of greyish pubescence; apical dorsal segment closely punctured, shallowly emarginate at the apex.

Hab. UGANDA, Entebbe (*C. C. Gowdey*), August 19–28. Two ♀♀ and 1 ♂.

Type in B. M.

Superficially this species resembles the oriental *Liris ducalis*, Sm.

Notogonia scricosoma, sp. n.

♀. Nigra; mandibulis, clypeo apice, antennis, tegulis, pedibus, abdomine, segmentis dorsalibus secundo tertioque modice infuscatis, ferrugineis; alis pallide flavo-hyalinis, limbo apicali pallide infuscato, venis testaceis, capite, thorace, abdomineque pallide aureosericeis.

Long. 13 mm.

♀. Clypeus subtruncate at the apex, not emarginate in the middle. Second joint of the flagellum equal in length to the third, about two and a half times as long as its breadth in the middle. Eyes separated on the vertex by a distance half as great again as the length of the second joint of the flagellum. Comb of the fore tarsi long and stout, six spines on the outer margin of the basal joint. Median segment finely transversely striated, the apex almost smooth, the sides finely striated, the segment longer than its breadth at the base, slightly convex, and without a median carina. Sixth dorsal segment closely punctured and covered with very fine pale golden pubescence. Tarsal unguis long, without a tooth. Second abscissa of the radius nearly as long as the third; first recurrent nervure received distinctly nearer to the basal angle of the second cubital cell than to the second recurrent nervure. The whole dorsal surface except the middle of the median segment is covered more or less

closely with very fine pale golden pubescence, which in some lights becomes almost silvery.

Hab. BRITISH EAST AFRICA, near Wangi, coast of mainland (*S. A. Neave*), February 21–22.

Type in B. M.

Motes liroides, sp. n.

♀. Nigra, pallide aureo-pilosa; tarsi tegulisque fusco-ferrugineis; alis flavis, apice late fuscis; segmento mediano transverse striato.

Long. 16 mm.

♀. Clypeus short, very feebly rounded at the apex, with an obscure carina from the base not reaching the apex. Second joint of the flagellum twice as long as the first and distinctly longer than the third. Eyes separated on the vertex by a distance equal to the length of the second joint of the flagellum. Closely and very minutely punctured, the median segment distinctly transversely striated, longer than broad. The whole dorsal surface of the head, thorax, median segment and abdomen more or less densely clothed with very delicate pale golden pubescence; the apical dorsal segment closely covered with short fulvous setae, the sides of the segment converging strongly towards the apex, which is rather broadly rounded and less than half as wide as the base of the segment. All the tarsal unguis have a small but distinct tooth close to the middle. The two recurrent nervures are received close together more than twice as far from the basal angle of the second cubital cell as from each other.

Hab. BRITISH EAST AFRICA, Witu (*S. A. Neave*), February 25–28.

Type in B. M.

This is another case of close resemblance to *Liris haemorrhoidalis*, Fabr., but the structure is different. It may be easily distinguished from the West African species *M. odontofores*, Kohl, and *M. cyphononyx*, Kohl, by the strongly convergent sides of the pygidial area and the different colour of the wings, which are quite as dark as in the most highly coloured specimens of *Liris haemorrhoidalis*.

Tachytes mira, Kohl.

Tachytes mira, Kohl, Ann. naturh. Hofmus. Wien, IX, p. 293 (1894), ♀.

Tachytes pulchrivestita, Cam., Sjöstedt's Kilimandjaro-Meru
Exp., II, p. 284 (1912), ♀.

This differs from *velox*, Sm., in the narrower pygidial area.

Gastrosericus neavei, sp. n.

♀. Nigra, albopilosa; orbitis interioribus verticem versus haud convergentibus, genis pone oculos spina magna obtusa instructis; alis fusco-hyalinis; tibiis posticis intus pallide flavis.

Long. 7 mm.

♀. Head broad, the eyes not converging towards the vertex, their inner margins parallel, separated on the vertex by a distance equal to about two-thirds of the length of the flagellum; the third joint of the flagellum fully as long as the second. Clypeus very broadly rounded at the apex, covered with short white pubescence; head very closely and distinctly punctured, a short longitudinal sulcus above the base of the antennae; posterior ocelli oblique, situated on a rounded prominence which is not divided by a sulcus, a narrow curved groove behind the posterior ocelli. Cheeks more than half as broad as the eyes, armed with a short, strong, blunt spine. Pronotum depressed below the mesonotum; the latter closely and rather strongly punctured, slightly depressed in the middle on the anterior margin. Mesopleurae and scutellum closely punctured; median segment shorter than the mesonotum, transversely rugulose and rounded posteriorly. Abdomen very minutely punctured; the first segment subpetiolate, the second slightly constricted at the base. Anterior coxae armed with a long seta. Second abscissa of the radius scarcely half as long as the first; the two recurrent nervures unite before their junction with the cubitus at one-third from the base of the second cubital cell, so that the second discoidal cell is distinctly petiolate.

Hab. BRITISH EAST AFRICA, Upper Kuja Valley, S. Kavirondo; 4,200 ft. (*S. A. Neave*), May 5-8.

Type in B. M.

This species is easily distinguished by the great distance between the eyes on the vertex and by the spine on the cheeks.

FEB. 11, 1913.